Amendments to the specification:

Please replace the paragraph starting at page 5, line 17 of the specification with the following paragraph:

Thus, in one embodiment, the invention provides a method of treating an individual, said individual having a disease or condition that is associated with abnormal vessel growth, comprising administering to said individual a therapeutically effective amount of a TNF-α inhibitor. In a specific embodiment, said TNF-α inhibitor is an ~~IMiD™~~ IMID™. In another specific embodiment, said ~~IMiD™~~ IMID™ is ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™. In another specific embodiment, said disease or condition is cancer. In more specific embodiment, said cancer is a metastatic cancer. In another more specific embodiment, said cancer is breast cancer. In another specific embodiment, said disease or condition is selected from the group consisting of inflammation, endometriosis, arthritis, atherosclerotic plaques, diabetic retinopathy, neovascular glaucoma, trachoma, corneal graft neovascularization, psoriasis, scleroderma, hemangioma and hypertrophic scarring, vascular adhesions and angiofibroma.

Please replace the paragraph starting at page 5, line 28 of the specification with the following paragraph:

The invention also provides methods of inhibiting angiogenesis in any context. Thus, the invention provides a method of inhibiting angiogenesis, comprising contacting a plurality of cells, said plurality of cells being capable of forming a vessel, with an inhibitor of TNF-α. In a specific embodiment, said inhibitor of TNF-α is ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™. In another specific embodiment, said plurality of cells is a plurality of cells within an individual. In another specific embodiment, said plurality of cells is a plurality of cells in cell culture.

Please replace the paragraph starting at page 8, line 29 of the specification with the following paragraph:

FIGS. 1(A-D). Photomicrographs of cultured cells in umbilical vessel ring assays as described in Section 6.2. A. Positive control. The explant was cultured in media + EGCF 200 μg/ml. Numerous cells that migrated from the explant surround the explant and the individual cells exhibited extensive outgrowth. B. Negative control. The explant was cultured in placental conditioned media + supplement. In the absence of EGCF, fewer cells migrated from the explant than in the positive control (A). C. Treatment Group 3. The explant was cultured in placental conditioned media + EGCF 200 μg/ml + ~~Thalomid™~~ THALOMID™ 100 μg/ml. In the presence of 100 μg/ml of ~~Thalomid™~~ THALOMID™,

cells migrated a shorter distance from the explant than in the positive control (A). D. Treatment Group 2. The explant was cultured in placental conditioned media + EGCF 200 μg/ml + ~~Thalomid™~~ THALOMID™ 10 μg/ml. In the presence of 10 μg/ml of ~~Thalomid™~~ THALOMID™, cells migrated a shorter distance from the explant and they exhibited less dense outgrowth than in the positive control (A).

Please replace the paragraph starting at page 9, line 8 of the specification with the following paragraph:

FIGS. 2(A-C). Photomicrographs of cultured cells in umbilical vessel ring assays as described in Section 6.2. A. Control. Cells were cultured in placental conditioned media + ECGF 200 μg/ml + DMSO l μg/ml. B. Cells were cultured in placental conditioned media + ECGF 200 μg/ml + DMSO l μg/ml + ~~Thalomid™~~ THALOMID™ 1 μg/ml. Fewer cells are seen than in the control (A). B. Cells were cultured in placental conditioned media + ECGF 200 μg/ml + DMSO l μg/ml + ~~Thalomid™~~ THALOMID™ 10 μg/ml. Fewer cells are seen than in the control (A) or in (B).

Please replace the paragraph starting at page 9, line 14 of the specification with the following paragraph:

FIGS. 3(A-B). Photomicrographs of cultured cells in umbilical vessel ring assays as described in Section 6. A. Control. Cells were cultured in placental conditioned media + DMSO. Cells exhibit predominantly a non-branching (*e.g.*, endothelial) phenotype. B. Cells were cultured in placental conditioned media + DMSO + ~~Thalomid™~~ THALOMID™. More cells exhibit a branching (*e.g.*, neuronal) phenotype than in the control (A).

Please replace the paragraph starting at page 9, line 19 of the specification with the following paragraph:

FIG. 4. Graphic representation of the effects of different concentrations of Thal1, ~~Actimid™~~ pomalidomide (CC-4047), and Fumagillin on human angiogenesis.

Please replace the paragraph starting at page 9, line 21 of the specification with the following paragraph:

FIG. 5. Pictomicropgraphs of placental embryonic-like stem cells cultured in an umbilical vessel ring assay as described in Section 6.3 in the presence of varying concentrations of Thal1, ~~Actimid™~~ pomalidomide (CC-4047) and Fumagillin.

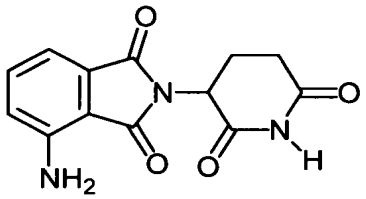
Please replace the paragraph starting at page 18, line 18 of the specification with the following paragraph:

Members of one class of compounds have been identified, using the assay methods disclosed elsewhere herein, as modulating angiogenesis and/or vasogenesis; specifically,

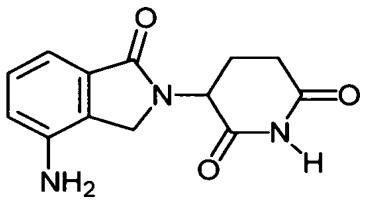
these compounds are anti-angiogenic compounds; more specifically, these compounds include ~~IMiD™~~ IMID™ (Celgene Corporation). As used herein and unless otherwise indicated, the term "anti-angiogenic compounds" or ~~"IMiD™"~~ "IMID™" used herein encompasses small organic molecules that markedly inhibit TNF-α, and have anti-angiogenic activity; that is, they act to inhibit the formation of new blood vessels. Specifically, the anti-angiogenic compounds of the invention enhance the degradation of TNF-α mRNA. This class includes racemic, stereomerically enriched or stereomerically pure and pharmaceutically acceptable salts, solvates, hydrates, stereoisomers, clathrates, and prodrugs of these anti-angiogenic compounds. Preferred compounds used in the invention are small organic molecules having a molecular weight less than about 1000 g/mol, and are not proteins, peptides, oligonucleotides, oligosaccharides or other macromolecules. Specific compounds of the invention are discussed below. These compounds can be obtained commercially from Celgene (Warren, NJ), or may be prepared in accordance with the methods described in the patents or publications listed herein.

Please replace the paragraph starting at page 23, line 8 of the specification with the following paragraph:

The most preferred anti-angiogenic compounds of the invention are 4-(amino)-2-(2,6-dioxo(3-piperidyl))-isoindoline-1,3-dione and 3-(4-amino-1-oxo-1,3-dihydro-isoindol-2-yl)-piperidine-2,6-dione. The compounds can be obtained via standard, synthetic methods (*see e.g.*, United States Patent No. 5,635,517, incorporated herein by reference). Certain of these compounds, such as thalidomide may be commercially available (*e.g.*, ~~Thalomid™~~ THALOMID™, ~~Actimid™~~ pomalidomide, and ~~Revimid™~~ REVIMID™ (Celgene, Inc., Warren, New Jersey)). 4-(Amino)-2-(2,6-dioxo(3-piperidyl))-isoindoline-1,3-dione (~~ACTIMID™~~ pomalidomide) has the following chemical structure:



3-(4-amino-1-oxo-1,3-dihydro-isoindol-2-yl)-piperidine-2,6-dione (REVIMID™) has the following chemical structure:



Please replace the paragraph starting at page 24, line 22 of the specification with the following paragraph:

Another class of compounds expected to have anti-angiogenic activity is referred to as PDE IV inhibitors. PDE IV inhibitors, like IMiDs, have TNF-α inhibitory activity. Preferred compounds used in the invention are known Selective Cytokine Inhibitory Drugs (~~SelCIDs™~~ SELCIDS™) of Celgene Corporation. Members of this class of compounds may also be tested for angiogenesis modulatory activity.

Please replace the paragraph starting at page 22, line 27 of the specification with the following paragraph:

As used herein and unless otherwise indicated, the term ~~"SelCIDs™"~~ "SELCIDS™" used in the invention encompasses small molecule drugs, *e.g.*, small organic molecules which are not peptides, proteins, nucleic acids, oligosaccharides or other macromolecules. Preferred compounds inhibit TNF-α production. Further, the compounds may also have a modest inhibitory effect on LPS induced IL1ß and IL12.

Please replace the paragraph starting at page 52, line 15 of the specification with the following paragraph:

As shown in the working Examples (*see* Section 6, below), the assay identified a class of compounds that exhibit anti-angiogenesis activity. These compounds are representative members of the class of compounds described in Section 5.2, above. Specifically, the representative compounds are ~~Actimid™~~ pomalidomide, ~~Revimid™~~ REVIMID™ and thalidomide. Other compounds may be identified by the assay in the same manner as described in the Examples, and elsewhere herein. Such compounds may be any compound that has the desired modulatory effect on angiogenesis or vasogenesis, and may be a protein, peptide, peptide analog, nucleic acid or nucleic acid analog, carbohydrate, lipid, small inorganic molecule, etc.

Please replace the paragraph starting at page 53, line 3 of the specification with the following paragraph:

Thus, in one embodiment, the invention provides a method of treating an individual, wherein said individual has a condition or disease associated with angiogenesis or vasogenesis, comprising administering to said individual an amount of an agent sufficient to detectably reduce said angiogenesis or vasogenesis, wherein said agent has been identified in an assay described herein as having anti-angiogenic or anti-vasogenic activity. In a specific embodiment, said agent is a compound that suppresses the activity of TNF-α. In a more specific embodiment, said agent is selected from the group consisting of thalidomide, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™. In another embodiment, the invention provides a method of treating an individual, wherein said individual has a condition or disease associated with angiogenesis or vasogenesis, comprising administering to said individual an amount of a compound that suppresses the activity of TNF-α, wherein said amount is sufficient to detectably reduce said angiogenesis or vasogenesis. In a more specific embodiment, said compound is selected from the group consisting of thalidomide, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™.

Please replace the paragraph and header starting at page 63, line 18 of the specification with the following paragraph and header:

1.1 Example 2: Effects of ~~Thalomid™~~ THALOMID™, ~~Actimid™~~ Pomalidomide and ~~Revimid™~~ REVIMID™ on Proliferation and Differentiation of Embryonic-Like Stem Cells Derived from Placenta

The following experiments evaluated the effects of ~~Thalomid™~~ THALOMID™, ~~Actimid™~~ pomalidomide and ~~Revimid™~~ REVIMID™ on the morphological differentiation of embryonic-like stem cells derived from placenta. The morphological differentiation of cultured embryonic-like stem cells was evaluated after fourteen days of culture in the presence of placental conditioned medium and with DMSO (control), ~~EGCF~~ ECGF, ~~Thalomid™~~ THALOMID™, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™. Cells were examined and scored for the presence of various cell markers, as well as scored for morphological appearance, such as total area occupied in the culture dish and the amount of branching and/or bifurcation exhibited.

Please replace the paragraph starting at page 64, line 14 of the specification with the following paragraph:

The results in Table 2 show that numbers of cells expressing CD34, CD35 and smooth muscle cell (SMC)-specific myosin heavy chain decreased when cultured in the presence of ~~Thalomid™~~ THALOMID™, ~~Actimid™~~ pomalidomide, or ~~Revimid™~~ REVIMID™ and numbers of cells expressing nestin and glial fibrillary acidic protein (GFAP) increased.

Table 2: Effect of DMSO, ~~Thalomid™~~ THALOMID™, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™ on the Expression of CD34, CD45, Myosin Heavy Chain, Nestin or GFAP

Treatment Group	CD34+	CD45+	SMC-specific Myosin HC	Nestin	GFAP
Placental Conditioned Media/DMSO	+	++	+	-	-
Placental Conditioned Media + ~~Thalomid™~~ THALOMID™ 10 µg/mL	+/-	+	-	+	-
Placental Conditioned Media + ~~Thalomid™~~ THALOMID™ 100 µg/mL	-	+	-	+	+
Placental Conditioned Media + ~~Actimid™~~ pomalidomide 1 µg/mL	-	-	-	++	-
Placental Conditioned Media + ~~Actimid™~~ pomalidomide 10 µg/mL	-	-	-	+++	+
Placental Conditioned Media + ~~Revimid™~~ REVIMID™ 1 µg/mL	-	-	-	+	+
Placental Conditioned Media + ~~Revimid™~~ REVIMID™ 10 µg/mL	-	-	-	++	+++

Please replace the paragraph starting at page 65, line 2 of the specification with the following paragraph:

In another experiment, the results of which are summarized in Table 3, embryonic-like stem cells derived from placenta were cultured, using the conditions described in the umbilical vessel ring assay described above, in the presence of placenta-conditioned medium with DMSO (negative control), ~~Thalomid™~~ THALOMID™, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™. After 14 days in culture, the cells were then immunostained for expression of CD34+, CD45+ and CD105+.

Please replace the paragraph starting at page 65, line 7 of the specification with the following paragraph:

The results show that culturing in the presence of ~~Thalomid™~~ THALOMID™, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™ produces a decrease in the numbers of cells expressing CD34, CD45 and CD105. *See* FIGS. 2A-2C.

Table 3: Effect of DMSO, ~~Thalomid™~~ THALOMID™, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™ on the Expression of CD34, CD45 and CD 105 in Cultured Placental Stem Cells

Treatment Group	CD105/TNC	CD34/TNC	CD45/TNC
Placental Conditioned Media/DMSO	33.7	2.37	9.44
Placental Conditioned Media + ~~Thalomid~~ THALOMID™ 100 μg/ml	7.0	0.38	4.21
Placental Conditioned Media + ~~Thalomid~~ THALOMID™ 10 μg/ml	6.8	0.64	3.87
Placental Conditioned Media + ~~Actimid™~~ pomalidomide 1 μg/ml	26.3	0.04	0.94
Placental Conditioned Media + ~~Revimid™~~ REVIMID™ 1 μg/ml	17.3	.22	1.71

Please replace the paragraph starting at page 66, line 1 of the specification with the following paragraph:

In another experiment, the results of which are summarized in Table 4, embryonic-like stem cells derived from placenta were cultured, using the culture conditions described above, and in the presence of EGCF, DMSO, ~~Thalomid~~ THALOMID™, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™.

Please replace the paragraph starting at page 66, line 4 of the specification with the following paragraph:

A "+" means that a branch or bifurcation was observed and a "-" means that no branch or bifurcation was observed. The results presented in Table 4 show that culturing placental embryonic-like stem cells in the presence of ~~Thalomid~~ THALOMID™, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™ causes a decrease in the total vessel area/field covered

by the cells, and also decreases the branching and/or bifurcation exhibited by the cells. *See also* FIGS. 3A, 3B

Table 4: Effect of ECGF, ECGF+DMSO, ~~Thalomid~~ THALOMID™, ~~Actimid™~~ pomalidomide or ~~Revimid™~~ REVIMID™ on Angiogenesis

Treatment Group	Total Vessel Area/Field (% Coverage)	Branching/Bifurcation (+/-)
ECGF	37.5+/-6.2	+
ECGF + DMSO 1 µg/ml	32.9+/-7.0	+
~~Thalomid~~ THALOMID™ 1 µg/ml	24.1+/-4.4	-
~~Thalomid~~ THALOMID™ 10 µg/ml	14.8+/-7.2	-
~~Actimid™~~ pomalidomide 1 µg/ml	11.3+/-2.8	-
~~Actimid™~~ pomalidomide 10 µg/ml	6.7+/-4.1	-
~~Revimid™~~ REVIMID™ 1 µg/ml	13.5+/-7.7	-
~~Revimid™~~ REVIMID™ 10 µg/mi	12.1+/-7.4	-

Please replace the paragraph starting at page 66, line 5 of the specification with the following paragraph:

The results in the Table 5 indicated that thalidomide requires the addition of rabbit microsome in order to show efficient inhibition of vessel formation. ~~Actimid™~~ pomalidomide, however, did not require microsomes for inhibition of vessel formation.

Table 5: Effect of thalidomide on mean microvessel growth in the rat aortic angiogenesis assay (expressed as & of control)

Concentrations	Control	Thalidomide (% of control)	Thalidomide + Rabbit microsomes (% of control)	~~Actimid™~~ pomalidomide (% of control)
10µg/ml	100	60	16.6	14.2
50µg/ml	100	82	17.6	Not done
100µg/ml	100	Not done	Not done	0.00

Please replace the paragraph starting at page 67, line 12 of the specification with the following paragraph:

Fresh human umbilical cords were collected by trained medical personnel under full donor informed consent from local hospitals. The cords were transported and treated within three hours. Umbilical cords and vessel lumens were rinsed with chilled basal nutrient medium. The artery was removed from the cord using mechanical means, forceps and small surgical scissors in an aseptic field. The vessel was cleaned of connective tissue and vessel rings were cut cross-wise in a length of 1 mm. The rings were placed into EGM-2 medium (Clonetics Corp.) in a 50 ml conical bottom tube and stored at 4°C. Six-well tissue culture plates were covered with 250 ml of ~~Matrigel~~ MATRIGEL™ and allowed to gel for 30-45 min at 37°C, under 5% CO_2. The vessel rings were rinsed in EGM-2 medium and placed on the ~~Matrigel~~ MATRIGEL™-coated wells, covered with additional 250 µl ~~Matrigel~~ MATRIGEL™, and allowed to gel for 30-45 min at 37°C (see Figure 6). The vessels were cultured for 24 hours in 4 ml of EGM-2 to allow the tissue to adapt to its new environment. After 24 hours incubation, the rings were treated either with 0.1% DMSO as control, or different concentrations of compounds (thalidomide or CC-4047). Culture medium was changed twice per week for total of three weeks.

Please replace the paragraph starting at page 68, line 1 of the specification with the following paragraph:

The effects of compounds on cultured vessel rings were compared with the effect of DMSO on vessel rings. The results were analyzed using ~~Image Pro~~® IMAGEPRO® Plus software (MediaCybernetics, Inc. Carlsbad, California).

Please replace the paragraph starting at page 68, line 4 of the specification with the following paragraph:

As is shown in Table 6 and Figures 4 and 5, both thalidomide and ~~Actimid™~~ pomalidomide inhibited the formation of microvessel outgrowth in a dose dependent manner when they are compared with DMSO treated samples. These experiments were done in duplicates and the results are the average of two rings in same experiment. A different concentration of Fumagillin is used as positive control in this experiment.

Table 6: Effect of Thalidomide and ~~Actimid~~ Pomalidomide on Microvessel Growth in Human Angiogenesis Assay

Concentrations	Thalidomide (% Inhibition)	~~Actimid™~~ **pomalidomide** (% Inhibition)
0..1μM	40	50.1
1μM	81.4	85
10μM	100	100